

THE TEACHER.

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"DID you ever see, my dear Reader, a Scotch mist; that half way between a rain and no rain, that drizzle and then a sprinkle, and then a trickle, and then a terrible pour,—just such as one may experience for many successive days up among the Scottish Highlands in mid-summer?"

"I thought not; for had you, you never would have complained as you did a moment ago, of this April day. Neither would my wife here, had she lived a bonnie lassie on the banks of the Doon, or under one of Scotia's mountains, heather-covered and holding the moisture like a sponge."

"Yes, but just look at the mud that Walter has brought in upon his feet. If I have swept out a quart I have a bushel."

"Then I guess, my dear, you have not swept out a quart. But why complain? Boys are not supposed to keep clean any more than the wheels which spatter the passers-by or the windows which hold the flying clouds of dust. They are like young shoots, near the earth and dirt-begrimed, but all the more tender and pure and sweet within because of it."

"If I had the sweeping and washing to do I should think differently? It may be so; and so if you will not

reproach the boy when he comes in (for I sent him out this evening, my dear Reader to visit one of his playmates much against my wife's wishes), I will save you a little sweeping by placing his slippers in the entry."

"I sent him out because he was irritable and impatient from a five hours' figuring at an algebra lesson. He had not finished it, and would not if he had ciphered as many hours more. Some of them, my dear Reader, would have tried your patience and mine. When will teachers learn that it is their duty simply to nourish and direct, and that to Nature belongs the honor of the fruit? When shall we have fewer crab-apples and more russets?"

"You see the boy's table is a sort of a ruin; and out of it just before you came in I plucked this letter. It is a boy's letter; but even a boy's honor is to be held sacred, and so you may consider it *sub rosa*."

MY DEAR WALTER,

Will you go over to Boston this afternoon and get some stamps? I am much obliged for the one you gave me Wenesday. This go over to the Spanish consols. I got a buly one there yesterday. Miss Fusey says "stop after scholl," witch will make me feel bad, of coarse. But she gives such fearfull long lesons I cant get them. Are you going to the Globe next Saturday afternoon? Dont let enybody see this.

Truely yours,

ARTHUR.

"I show you the letter, my dear Reader, because I desire you to notice the spelling. Here are eleven very common words spelled wrong in a composition of about half-a-dozen lines. And I was thinking before you came in that spelling now-a-days was getting to be one of the lost arts. Children do not, it seems to me, spell as well now as formerly. And I have been wondering where the trouble lies. And the more I consider the matter the more I am inclined to believe that the modern spell-

ing-book is the criminal and the source of all the evil. A spelling-book lies before me now. It is extensively used in the New England States. It has been recommended by superintendents and Rev. Drs., and, for aught I know, by big-hearted and easily-yielding governors of States. In the preface I read:

“‘The words for spelling are presented in numerous classes or divisions, in order to illustrate the various principles of orthography and pronunciation.’

“A philosophical idea perchance. But how does it work practically? Why, in the very first of the book we find with such simple words as ‘mistake’ and ‘notice,’ ‘amice’ and ‘traduce’; on another page near by, with ‘chaise’ and ‘sugar,’ we find ‘capuchin,’ ‘galoche,’ ‘cetaceous’ and ‘schistous.’ Then we do not meet with such simple words as ‘dizzy’ and ‘lazy’ and ‘welcome’ until the child has nearly finished the book. The consequence is, that children are not drilled upon many of the simpler words at an age when they are continually using them; and that many leave school unable to spell very common words and with their memories burdened by a host of others which they will never think of using. I examined a room the other day in this very branch. I called up a bright, black-eyed boy. Charlie, spell ‘which.’”

“‘W-h-i-t-c-h, which’; and it was promptly spelled.

“Now spell ‘exchequer,’ I said.”

“‘E-x, ex, c-h-e-q, cheq, u-e-r, er, exchequer,’ as promptly said.”

“So here was a boy unable to spell a word which was on his tongue a score of times a day and yet could spell one much more difficult, of which he had no comprehension, and will not until he reaches manhood. The boy,

whose note to Walter you have just read, was taught in the same way.

"How would I teach spelling? Well, if I were privileged, it would be something after this plan: Suppose the child is eight and has entered the grammar school. I would place before him a vocabulary of words, just such as he can comprehend and ought to be able to use. I would have him memorize these, and only these; and at the same time I would instruct him how to use them in speech, oral and written. At the age of nine I would add to the vocabulary, and continue my instruction in the same way. With each year I would continue to enlarge the list of words, gauging his intellect every time. Now, what would be the result? Why this, it seems to me; when ready to graduate, he would have a stock of words, every letter and every syllable of every one of which would not only be stamped upon the retina of his memory, but, like trained soldiers, be marshalled easily at his command.

But here comes the boy, — I know his whistle and his bound; and I have forgotten to put those slippers in the entry. Excuse me a moment.

MAY time, in golden chariot fleet,
Fling round his pathway incense sweet ;
May roses bloom beneath his feet ;
May Heaven guard from cold and heat
My boy across the sea.

While the clouds grow dark and weep ;
While the tempest froths the deep ;
While sin we sow and death we reap ;
Keep, O God, O lovingly keep
My boy across the sea.

THE PRONUNCIATION OF LATIN.

WHILE the earnest discussion of the best method of pronouncing Latin is going on among learned philologists, and while instructors of schools and colleges are recommending a method differing somewhat from the former practice of most American schools, we teachers must meet the question: How shall we teach our pupils to pronounce Latin? In answering this question, our choice lies between what is known as the English method on one hand, and on the other a method conforming somewhat to one or another of the existing languages of continental Europe. I prefer to abide by the English method. I will give some reasons for this. I do not claim that any one of them is enough by itself to decide the matter, but considering them altogether, they are enough to make one wait a little before making a change.

The English method is more easily acquired than any other. It requires no special training of the organs of speech for one who has already got a good pronunciation of English. A few simple rules mastered at the outset put the student where he can readily utter most of the words he will meet. His knowledge of English that he began to get in his cradle helps him to pronounce the Latin, and prepares the way for him to go as easily as possible from one language to the other. But by other methods the learner has not only new words but also strange sounds, and he can best get at the new pronunciation by setting aside the laws of vowel sounds that have become wrought into his being, and adopting something in place of them that is to him awkward, unnatural and a constant care.

It is much the same thing that it would be if he were required to write his Latin exercise with the left hand. His skill thus acquired never could be equal to the dexterity he had at first; but much time and pains would be spent in learning to grasp his implement, which would better be spent in learning to wield it.

In laying out a course of study it is best so to plan it that the greatest practical advantage can be derived from it in a given time. The great mass of students that study Latin need the discipline and culture that comes from a study of the structure of

the language, the rhetoric and genius of it, the history and ethnology wrapped in it, more than they need the results of a memorizing of the quantity of radical syllables. This memorizing must be done if we are to have the proposed changes adopted ; and it will require the work of at least six months, and more probably a year, to enable the student to pronounce according to what is "recommended" in some of the college catalogues, as well as he can pronounce according to the English method after a study of two weeks. It is a question whether the time spent learning any of the methods varying from the English might not be better occupied.

In the use of the English pronunciation we shall have in our own country, at least, something approaching to uniformity. We hear talk about the continental system. If by this be meant a system that is used throughout the continent of Europe, this use of the term is a misnomer. There is no such thing as a continental system. In every country of Europe the Latin is pronounced, even in the universities, very nearly according to the vernacular. The German can do no better with the sound represented by our *th*, in a Latin word, than he can in an English one ; so, too, with the sounds of *d* and *b* final, and other sounds. Some things that are defended by the advocates of a so-called continental system are simply a conformity to utterances from the defective vocal organs of Germans, Frenchmen, Italians and Dutchmen. To be sure, there is a degree of uniformity in the vowel sounds of most European languages, but there is great diversity in the consonant sounds, and this diversity will be sure to appear in the attempts to establish a continental method, and we may have in different schools men who have studied in Rome, Venice, Berlin and Paris, each teaching what he thinks is the continental system, but each differing from all the rest and unable to understand any of them. Thus the discipline and training of the ear that come from accuracy and precision in pronunciation will much of it be lost, and confidence of pupils in any system as being right will be destroyed.

Any of the so-called continental systems will lead to confusion in the use of Latin terms in botany, medicine, law, and the arts and sciences generally. The Latin nomenclature of science has become largely wrought into our language. Many popular

names of plants, for instance, have been displaced by the scientific names. If we consider the various ways in which *v* is pronounced, and *j*, and *c*, and *t*, and *g*, and also the vowels, we may be interested in giving the divers pronunciations of some words, such as *convolvulus*, *convolvulaceae*, *geranium*, *juncaceae*, *acacia*, *portulacaceae*, and any others of the Latin names of plants. To these can be added the terms *viva voce*, *vice versa*, *sine die*, *jus civile*, *jure divino*, *judex pacis*, *habeas corpus*, *venire*, *capias*, *certiorari*, which are most of them daily in use in our courts and legislatures. Imagine the scene, or rather the sound, in a court of law, when a judge taught to pronounce according to the English sounds is presiding when lawyers are practising who have learned the various European sounds.

It needs but a brief reference to the common Latin names in constant use among physicians and druggists, to see what a serious inconvenience the use of the German, French, Italian, or any other European pronunciation, will work in medicine. An effort has already been made in our State to compel by law physicians and druggists to use English instead of Latin in prescriptions. The effort got further towards success than it ought to. I think that if successful it would be a misfortune, and that instead of simplifying the practice of medicine, it would greatly complicate it. But if anything will increase disgust among the opponents of the Latin terminology and add to their number, it is to remove the pronunciation further from the common sounds of English words.

A European pronunciation would make the Latin far less quotable. Fourth of July orators and Congressmen would most likely cease to taper off their speeches with tid-bits from the robust periods of Cicero, or the cranky metres of Horace. This might not prove an unmixed evil, but yet it can hardly be regarded as an advantage to classical scholarship if such confusion be made, that the scholars of our own country cannot understand one another. I have observed that in certain gatherings of classical teachers, most of them are shy about naming Greek words. The fact that there is great diversity of pronunciation is a barrier to perfect freedom in using the language; are we to be under the same embarrassments in the use of Latin?

We sometimes hear it said that a European pronunciation will enable a student to converse in Latin with European scholars. It may be questioned whether such is the fact, or whether, without the aid of native European teachers, our pupils can get the French or German pronunciation of Latin well enough to be understood. It is certain that there is no one method that is intelligible to all European scholars. Probably there is among the clergy of the Romish Church the least divergence that will be found in any one class of men; and yet at the last ecumenical council the bishops speaking in Latin could not understand one another.

If we only *knew* how the old Romans spoke, perhaps there might be some reasons for imitating them; but we *don't* know. We have lately, from authority as good as the best, the declaration that their exact pronunciation "cannot of course now be known." Why try to imitate what "cannot be known?"

I do not attempt any philological argument. In the present stage of classical scholarship, it seems to me that argument must be very incomplete. A century of comparison, of classifying puns, witticisms, cases of onomatopœia, and other evidences, will doubtless give much additional light, and make and mar many theories. The time has not yet come for fixing upon any method differing from our vernacular. Many changes must be made before we get a fixed system.

In abiding by the English we have a permanent standard. In taking other methods we follow fluctuating guides, who attract to themselves much of the attention that would better be given to the fields through which they lead us.

A. C. PERKINS.

HOW SHOULD CHEMISTRY BE STUDIED

Two advantages are derived from the proper study of chemistry; first, a knowledge of the facts of the science itself, such as the properties of substances and the explanation of the phenomena in which they take part; and second, the training of the mind to processes of inductive reasoning, fitting it to weigh evi-

dence where positive knowledge is wanting, to observe accurately and to describe intelligently.

There is probably no study better adapted to the attainment of the results last named than that of chemistry, and it is quite possible that facts may justify the assertion that the second advantage is almost invariably overlooked by teachers, and, consequently, one of the most important objects of all education is practically disregarded in studying and teaching this science.

Since the pupil remains but a few years, at most, in the Grammar or the High school, his education should have reference, not simply to the accumulation of a limited number of facts, but rather to such a preparation as shall enable him to gather new facts for himself when his school-days are over.

Very little practical knowledge of chemistry, natural philosophy, botany, or any other of the natural sciences can be acquired by the student from a lesson given once or twice a week for a few months in the year. The Grammar or the High school is not intended to make chemists or philosophers,—to graduate Liebig's or Newtons; but it should give the student a sure foundation upon which he may build, and which shall enable him to attain some eminent proficiency in any special department to which he may devote his attention. How often is this accomplished?

The methods frequently adopted for studying the natural sciences, and particularly of chemistry, are such that they rarely confer any real benefit upon the student. The *facts* of the science are often learned and recited one day only to be forgotten the next, while, perhaps, no thought of *inductive reasoning* is entertained by either teacher or pupils.

In this series of articles which have been prepared for the *Teacher*, it is proposed to offer a few hints which have suggested themselves to the writer, by which some progress in the attainment of the derivable results already stated may be made, while the amount of positive knowledge actually acquired may be largely increased.

Chemistry is an experimental science. All the knowledge we have of chemical facts has been acquired solely by experimental investigation. Workers in new fields of chemical science perform

experiments and record the facts deduced from them ; and it is natural and proper that new workers in old fields of the same science should follow in the way which experience has proved to be so fruitful in beneficial results. *Chemistry should be taught and studied mainly through practical experiments performed by the student himself.*

In many schools there are no conveniences, no separate room for such practical instruction ; and in such cases the teacher should perform all the experiments before his classes that his convenience in the school-room itself will allow.

Chemical lectures and experiments before classes do not require expensive apparatus ; nor need the experiments be limited in number ; on the contrary, the more numerous they are the better ; but the apparatus used may be of very simple construction and of ordinary materials. Copper gasometers, and oxy-hydrogen blow-pipes, pneumatic troughs of elaborate arrangement, and galvanic batteries of enormous power are not necessary to teach the elementary principles of chemistry. A thousand dollars may be so spent in the purchase of apparatus, chemicals, etc., as to fail in securing much practical benefit, whereas ten dollars judiciously expended may be made to cover the expenses of an entire series of lectures.

Everything depends upon the teacher. Is he ingenious? Can he adapt the simplest arrangement to the performance of nearly every experiment? *Is he familiar with the science?* In such a case the smallest expenditure for apparatus will suffice. Does the teacher depend upon the book? Does he purchase apparatus to be shown in the cases, and which serve only as a source of wonder to the pupil who never sees it used? Is the teacher deficient in practical acquaintance with the subject, yet compelled to teach (?) to keep up with the times? The most elaborate apparatus fails to impress any ideas upon the pupil other than that hydrogen is prepared from zinc and sulphuric acid, and that a watch-spring burns in oxygen.

Where there are no facilities for each student to perform the experiments for himself at school, he should be encouraged to perform them at home. By this means he will take greater interest in his studies, his powers of observation will be strengthened, his inventive faculties stimulated.

An intelligent boy will make a spirit-lamp from a mustard-box, a gasbag from a bladder, a retort stand with wires. For him, a bowl will serve the purpose of a pneumatic trough, a saucer will be used for an evaporating dish.

It is not our present purpose to suggest means for teaching chemistry with simple apparatus ; but to suggest an *order* in the study of the subject which is calculated to develop the reflective faculties of the pupil, thus attaining the second of the advantages stated to be derived from the proper study of chemistry.

In a future paper a plan will be suggested for the study of the composition of the atmosphere upon the inductive plan.

READING.

THE SHADOW.

I.

BLUE skies cannot awake the fancy old
That sleeps within my heart ; though fair are they
Flecked bright with playful clouds, or clear and cold. —
The dearest days wear skies of gentle gray,
Tinged faint, low down, with rare ethereal gold.

II.

They bring a dream, I thought beyond recall,
A fancy of a half-forgotten strain
Trilled faint by idle bird ; — a lazy fall
Of pale syringa petals, sweet in vain ; —
A dim half-shadow on the garden wall.

ALICE C. OSBORNE.

SOMETHING MORE ABOUT ORAL TEACHING.

A WHILE ago I was in conversation with several educators, two or three of whom were practical teachers, and the subject came up of the true ideal of the work of a grammar school. It was admitted on every hand that no theme relating to popular education

is less determined at the present time than this ; and one of the teachers in our company, a young, fresh, progressive man, declared that he felt as if afloat on the broad sea without compass or rudder, in regard to this vital question ; that a cloud envelops his courses, which renders his purposes aimless, and chills his enthusiasm, because perplexed by antagonistic theories, he hesitates by what headlands to shape his course.

The older heads, among those present, — with one or two exceptions, — not being fossil specimens of the palæozoic age, pronounced this a very hopeful state of things. It proves that the leaven of reform has been thoroughly working, and has accomplished so much already as to divide the field with the dogged conservatism which it would perpetuate. And the conviction was expressed, that let the noble corps of reformers but follow up with faithful perseverance the advantage already gained, careful to demonstrate wherein what they stigmatize is erroneous, and to advocate no changes which cannot be proved to be reforms, and it will not be long before the whole field will be won, and our grammar schools be worthy of the applause which, falsely in some regards, they now arrogate to themselves.

Then the talk turned very naturally upon what were likely to be the constituents of a reconstructed and satisfactory course of study. I had not long before been reading in the Boston Advertiser the letters of Mr. G. B. Emerson, that veteran philanthropist, who has written and said in his life so many good things on the subject of education, in which, criticising the Boston schools, he pleads for a place for the knowledge of common things, — knowledge of nature, science, art, animal and vegetable life, in those particulars in which they meet us at every turn, and minister to our needs and our pleasures, — so that links of connection may be established between the routine of school work, and the realities of the outside world ; and boys be instructed in the mechanical and philosophical principles of the arts to which their lives are to be devoted ; so I remarked, quite earnestly, referring to these letters, that Mr. Emerson is right, — eminently right, and this information must be given in our schools. I added my humble conviction that it is to be communicated, as Mr. Emerson himself urges, not by means of text-books to be studied, but of interest-

ing books to be simply and enjoyably read, — and also by means of well-illustrated and systematized oral teaching.

At this, one of the teachers present set his teeth, doubled his fist and burst forth in rejoinder: "All the talk about oral and object teaching is sheer humbug. In whatever form you may introduce it, it will be a sham and a failure. It is a comparatively poor instrumentality even when adults are the subject, and is all the more ineffective with children. Passive listening to the talk of teachers, plants very few mental seed. If what is heard does not go out at one ear about as soon as it goes in at the other, at least it becomes such a jumble in the memory as to be little better than no knowledge at all. No; let us have elementary studies taught by the good old method of hard regular taskwork, — lesson and recitation. Hard work over the printed page, — work for the memory, — drilling the subject-matter into its substance so that it will be permanently held there, is the only trustworthy course."

"True," added a second teacher, no less emphatically; "and what is more, oral teaching does not discipline the mind. It is too disjointed and fragmentary. Now, I believe that the studies pursued in our schools should be so managed as to discipline the minds of the scholars."

There is a vital truth in each of the statements; a truth, however, which, when acted on without due modification, is as pernicious as the baldest error; and, I grieve to say, that there are hosts of teachers who, blindly and stubbornly accepting such reasoning as conclusive, without modification, maintain their school-rooms, which should have their atmosphere always full-charged with mental electricity, — all quivering with vitality, — as places where formal rote-work is daily repressing and gradually paralyzing the powers of the able, and rendering more stolid than ever the stupidity of the weak.

So I propose to say a few words in this paper about oral teaching, as a method and a discipline.

First, as a method, in reference to the position, that what is taught orally does not inhere in the memory; while what is learned through taskwork is a permanent possession.

This is unsound reasoning in every particular. In the first place,

all that we learn by means of memoriter delving does not stay by us, even when that delving has been most faithfully performed; and praise be to a kind Providence that it is so; else, what an awful mass of useless lumber the scholars of most public schools would have in memory! Put a class under fourteen years of age upon any study involving numerous details, such as geography, or history, and do your best with them by means of rote-work. Tie them down to their text-books day after day; hear them recite the same pages over and over again; review them and re-review them. Then let a few months elapse without recurrence to that subject, and after such an interval take them upon it once more. And what halting, defective work they will make of it. In fact, this treachery of the memory is so universally admitted by teachers, that it dictates the practice of schools in many regards. For instance, it is on this account that the pedantic examinations for admission to high schools, — why will school committees still continue those arbitrary, unphilosophical tests! — are arranged invariably so as to follow close on the heel of the laborious drill which has prepared the candidates for them. For, were a few weeks suffered to elapse between the drill and the test, so much would drop out of memory in the interval that the blunders of even the best scholars on memoriter details would put their teachers to shame.

Indeed, let any adult, unless he have an exceptional memory, marshal his childhood's acquisitions in array, and of all that he learned through hard delving taskwork, how little will be found to remain.

Now, take the other side. Of our living recollections, which are perhaps like sunfires along our pathways, how many were inperishably stamped on our memories by some single and instantaneous stroke, as, for instance, a chance remark from another's lips! How many such a recollection, with its perfected outlines, was thus flashed into the mind, just as the sun photographs its image by one gleam of its ray!

Take out from one of our grammar school classes a child who comes from an intellectual home. As is well known, such a child, if possessed of good parts, stands far in advance of his less fortunate mates in many particulars. He is largely furnished

with knowledge in comparison with them. His mind touches almost every subject which may be introduced, at many points. He learns easily, because so much is already known to him, and he possesses so superior a vocabulary. Now, how did he acquire this various knowledge—this vocabulary? By drill through taskwork? Never. Only by reading and listening; a single stroke, in almost every instance, making the permanent mark. The circumstances were favorable. His mind was on the *qui vive*—aglow with curiosity, eager, receptive; and what it received it kept.

Thus, it depends on the condition of the mind, on the measure of its receptivity, whether the memory will take up what may be put before it and store it away, and not on the form in which it may be presented; and to excite this right condition of mind, a plastic sensitiveness, an eager curiosity, a tenacious receptivity in connection with the studies of the school-room, so that what may be taught will be remembered, is one of the most vital of the problems which should be quick in the teacher's regard. Let him rest assured that he cannot induce it by mere rote-work, — no, not though he stand over his class hour after hour, cowhide in hand, ready to give a stinging cut to any scholar who may lift his eyes from his books, and makes them delve until every word can be recited as glibly as it is in the power of the organs to utter it. It is the product of enthusiasm in the live suggestive teacher kindling a responsive enthusiasm in his scholars, — life begetting life, — thought begetting thought, — so that their minds will grasp and appropriate the truths and facts which may be presented. It is thus that illustrations should be made to cluster around the lessons from the text-books, and impart to their otherwise dry and prosy statements a juicy richness and an attractive charm; and that such topics of general interest as have been referred to, outside the regular studies, should be set forth in forms so engaging as to be delightedly heard, — in a spirit of eager curiosity, and because so heard, retained.

It is in large measure through the use of the eyes and the ears, not in taskwork by any means, but in the most desultory, fragmentary way possible, here, there and everywhere, at home and abroad, that the senses and observing powers acquire the

stores of that knowledge which is the material of thought. Lord Brougham said that if all which a child learns during the first two and a half years of his life were blotted out from his memory when he becomes a man, so much of the groundwork of his knowledge would be gone as to render him helpless in his ignorance. This is true; and in imitation of nature in her method in this regard, let the teacher value oral instruction as a mighty instrument in his hands. Only he must be sure that *mental curiosity* is vividly awake and craving before the food is given.

Now, a few words respecting the objection that there is no *discipline* in acquiring knowledge by means of oral instruction. I am in the habit of going to nature for guidance, and I shall trust her lessons to the last. I don't believe any wiseacres of this generation will improve on her methods. There have been those who have thought they could have created man and his surroundings to better advantage than God has done; but I believe they have convinced none of their superior ability except themselves. I have faith in the ordering of nature; and since she provides that a child shall store up immense resources of facts in a desultory, fragmentary, unsystematic way, I have confidence in the superiority of that way. If there is no discipline in it, then plainly there is no need of discipline in such a connection. Not one word more need be said.

No doubt some of the information thus communicated will elude the memory under the best of circumstances; and still more will make impression with less precision than may be desired. To remedy these defects, let the scholars be required to take notes of every oral lecture and write an abstract afterward. No school exercise, for various reasons, is more valuable than this.

When about to write this last paragraph, it crosses me that I have been presenting suggestions and arguments which are as familiar as the alphabet. Still, there is a field of information of the utmost importance, which must be cared for in our grammar schools. As yet it is fallow. It is to be tilled by means of oral teaching, and until its neglect shall be visited as a gross defect and wrong, such suggestions and arguments must be repeated with all the emphasis the true friends of education can command.

H. F. HARRINGTON.

OBJECT TEACHING IN GEOMETRY.**POLYHEDRONS.**

WHAT is a polyhedron? A polyhedron is a volume bounded by polygons. Is this room, in its general shape, a polyhedron? It is. Then it is a volume; what is a volume? A volume is a limited portion of space, having three dimensions, length, breadth and height, or thickness. Name any boundary of the room. The ceiling. Then the ceiling is a polygon; what is a polygon? A polygon is a plane figure bounded by straight lines. What is this room, then? A volume. And bounded by what? Polygons. Being a volume bounded by polygons, what is its geometrical name? A polyhedron. Name any other polyhedrons. The desks. Yes, in their general shape. The door. A board. A pane of glass. This ruler. Is this a polyhedron? (Holding up the model of a prism.) Yes, sir. What kind of a polyhedron? A prism. What is a prism? A prism is a polyhedron in which two of the faces are polygons equal in all their parts, and having their homologous sides parallel. The other faces are parallelograms. Is this room a prism? It is. Yes, this room is that particular kind of polyhedron called a prism. What name will you give to all the bounding polygons? They are the faces. What is the name for the lines in which the faces meet? The edges. What are the points called in which the edges meet? The vertices. What are the faces? The bounding polygons. What are the edges? The lines in which the faces meet. What are the vertices? The points in which the edges meet. What shall we call the ceiling? The upper base. The floor? The lower base. The sides of the room? The lateral or convex surface. The lines in the corners which reach from floor to ceiling? The lateral edges. (Holding up a pentangular prism.) What is this? A prism. (Touching the top and bottom.) What do I touch? The bases. Which is this? The upper base. And this? The lower base. (Grasping it.) What part does my hand touch now? The lateral, or convex surface. And what are these lines? The lateral edges. And what is this line clear around the base called? The perimeter of the base. (In like

manner, it may be shown that the room is not only a prism, but a right prism, in distinction from an oblique; further, that it is a parallelopipedon, a right parallelopipedon instead of an oblique; (holding up an oblique) and that peculiar kind of right which is called a rectangular parallelopipedon. (Holding up a right which is not rectangular.) A cube may then be exhibited as that kind of rectangular whose faces are squares. (The other polyhedrons may be discussed and apprehended in the same way.)

What is the diagonal of a polyhedron? The diagonal of a polyhedron is a straight line joining the vertices of two polyhedral angles not in the same face. Name any in this room. From that upper corner across the middle of the room to this lower corner. How many could there be in the room? Four. In this instance, would all four be of the same length? They would. (Show that they would not be equal in certain other polyhedrons.) What is the volume of a polyhedron? The volume of a polyhedron is its numerical value expressed in terms of some other polyhedron as a unit. The unit generally employed is a cube constructed on the linear unit as an edge. How could we get the volume of this room? Multiply the length, width and height together. In what denomination can we get the length? In feet. Then the foot in length will be our linear unit and the cubic foot our unit of volume. Here, Brown and Smith, take this tape, and find the length. (Criticise their work.) Jones, write it on the board. 30.4 feet. The width, 19.8 feet. Boys, now guess at the height, and put your guess on your slates. All guessed? Stevens, set the ladder up in that corner and hold it while Brown goes to the top. How much? Just fourteen feet. How many guessed right? Only three? How many within a foot? Ten. That is pretty well. Now all find the volume of the room, and then see how many can get its convex surface and the area of the two bases.

DEMONSTRATION OF A PROPOSITION. DE-MONSTRARE.

In any prism, the sections made by parallel planes are polygons equal in all their parts.

The figure is drawn upon the blackboard and the course of reasoning gone through with in the usual way.

Now, Norton, bring your knife and French turnip to the desk. There, carve out for us as perfect a pentangular prism as you can. Very well done. Let me take the knife now and you return to your seat. The knife blade, boys, may very properly be called the cutting plane. I will pass it obliquely through the prism in these two places about an inch apart. Look at the sections, what are they? Equal polygons. If I should pass it through in several places, making parallel planes, would all the planes be equal polygons? They would. Dana, what is the corollary? The bases of a prism and every section parallel to the bases are polygons equal in all their parts. (Cutting.) You see that the corollary is true. Now, boys, this seems to be a very nice turnip, and if you choose, — no, Baker, not chews, — you may eat it at recess, and I hope by to-morrow the whole matter will be thoroughly digested.

N. E. WILLIS.

THE DUTCH SCHOOLS.

HOLLAND possesses a school system complete in its details, and embracing in its scope provision for the children of all classes of people within the realm. Almost immediately a child can walk it is cared for in the "Bewaar" school; some, indeed, are placed in these useful institutions even before they can well walk. At six years of age it finds its way to a public elementary school of such a class as accords with its station in life; *all* are open to it on remarkably easy terms, some of course, being entirely free. Then if, having attained the age of thirteen or fourteen years, circumstances admit of the course of instruction being further prolonged, excellent provision is made in the higher schools for the pursuit of advanced studies under the most favorable conditions.

Throughout Holland it is expected that every child of school age shall be placed under efficient instruction. From six to fourteen years of age is usually considered as the term during which a child ought to attend school; but practically, the average period of instruction is much shorter. M. L. Mulder, the inspector of schools for the province of Utrecht, to whom I am indebted for

much valuable information, says: "the majority leave, alas! in their twelfth year; this is especially the case in the country districts." But the Dutch children, as a general rule, make capital progress whilst at the public elementary schools.

There is no direct compulsion. Yet there is, perhaps, its equivalent. The parent is not made amenable to the law for non-fulfilment of the duty of sending his child to school. But the great force of public opinion supplies a potent agency in helping the progress of national education. Public opinion decrees that every parent shall, even at a sacrifice to himself, cause his child to be well grounded at least in the rudiments of knowledge. In the large towns, this feeling seems general even amongst the lowest classes; in the country districts it is found that parents too often yield to the temptation of sending their children to work much earlier, and with a much more scanty stock of knowledge at their disposal than should be permitted. Here, the lever of direct compulsion is required. But there is a penalty for neglect, although it is not enforced by imperial legislation. The managers of most of the great charitable institutions have by common consent agreed to withhold all aid from such parents, however poor, as refuse to send their children to some school.

To the children themselves, unquestionably, the school has great attractions. The schoolmasters say the children look forward with eager expectation to the time when they are permitted to take their places in the class, so pleasant are the associations of the school-house in the minds of all young people. For a longer or for a shorter period, then, the Dutch child is really got to school, and there ample provision is made for all.

The Dutch educationist holds that there is a visual as well as an oral method of imparting instruction; that the intellect must be trained by the use of both eyes and ears. Therefore, no dingy, dirty-looking buildings are used as school-rooms. In Amsterdam, as in other towns, the school-houses have characteristics which enable the stranger easily to distinguish them at once. Cheerful-looking, airy buildings they all appear to be. Some of the decorations, indeed (though invariably in excellent taste), would, perhaps, seem to rigid utilitarians rather out of place. As for instance, in the case of the "School Zeemanshoop" — held in what was formerly

the abode of the "Club Zeemanshoop" (or the Club of the Seaman's Hope), which has been purchased for the purpose of establishing a public elementary school there by the town council of Amsterdam, — the decorations on the ceilings of the principal room and gymnasium, and the noble entrance hall with fine marble staircase would probably rather shock some so-called "economists," who imagine any kind of room with four walls sufficient for the purposes of a public school. Yet the child who receives his early training in such a "home of taste" may surely be expected to catch some refining influence from the daily contemplation of artistic forms. Experienced teachers believe such to be the general effect of these associations, and certainly the demeanor of the children thus happily privileged seems to confirm the opinion. But for the common free schools, though no superfluous decorations are attempted, the buildings are invariably neat, substantial, and well planned. In connection with many, — especially in the large towns, — there are capital well-appointed gymnasiums; and it may be mentioned that at some of the higher class of public elementary schools, special teachers are retained to give instruction in calisthenics.

Before a building is permitted to be used for a school of any kind (public or private), it must be inspected and certified as appropriate for the purpose. The law prescribes that any person holding a school in a building or room that has been declared by the district inspector to be unfit for such purpose, incurs a fine of from two to four guineas for the first offence, and a fine of from four to eight guineas and a week or a fortnight's imprisonment for the second offence. The effect of this salutary measure is, that the Dutch have no small, ill-ventilated, dirty rooms, crowded with neglected children "sent out of the way" by careless and ignorant parents, — a sight sadly too common in Sheffield and other large English towns.

In like manner unqualified persons are prohibited from becoming teachers. Article 8 of the law on elementary instruction ("De wet op het lager onderwijs, 1863") enacts that whoever gives elementary instruction without being duly qualified (or certificated), shall become liable to a fine of from two to four guineas for the first offence, and from four to eight guineas and be im-

prisoned for a term not exceeding a fortnight, for the second offence. Thus a check is put upon ignorant and incompetent people, who, finding all other means of gaining a livelihood failing them, might wish to "buy a rod, and turn pedagogue."

Further, the subjects in which successful examinations have been passed are clearly defined on the teacher's certificate, and the holder is permitted by the law to give instruction in these subjects *and no others*. Thus, if a teacher is certified only as qualified to give instruction in two or three subjects, he must confine himself to teaching those alone; and if he desires to engage in conducting classes in other branches of study, he must first pass a further examination and obtain an additional certificate of competency in respect of such studies. Teachers in the Dutch national schools do not seem to be by any means overpaid,—the salaries of some are surprisingly low; yet as a rule they appear to be very efficient, and they go about their work with an amount of intelligent enthusiasm which cannot fail to exercise a potent influence for good, not only on the scholars immediately under their charge, but upon the whole system.

Examinations of candidates for certificates are held twice a year,—in the spring and in the autumn. The inspectors and sub-inspectors form the board of examiners, and they are generally assisted in each case by able and experienced teachers of the respective districts. Thus theory and practice are combined. Headmasters' certificates are not granted to any candidates under twenty-three years of age, and under-masters must be not less than eighteen years of age. A candidate may submit to the examination repeatedly, if necessary, until the certificate be gained. Special diplomas are awarded to those who seek to teach mathematics, drawing, gymnastics, plain and fancy needlework, English, French, or German. The examinations of male candidates are carried on in public, but the female candidates have the advantage of private examinations. All the examinations are conducted with great fairness, and they are considered to answer their object most thoroughly and at the smallest possible expense both to teachers and the public.

JOHN F. MOSS.

THE ART OF TEACHING.

WHAT is teaching? Let us illustrate and define. *Teacher.* (requiring the pupil to pass his hand over the surface of the blackboard), what kind of a surface is it? *Pupil.* A flat or plane surface. *Teacher.* Make four straight lines meeting each other. What do these lines inclose? *Pupil.* A portion of a plane. Write the words on the board. How is this portion of a plane bounded? It is bounded by straight lines. Write this under the first. Bounded by how many lines? Four. Write. Tell me what you have. A portion of a plane, bounded by straight lines, four in number.

What is any portion of a plane bounded by lines called? A plane figure. Describe this figure. It is a four sided plane figure. Quadrilateral means having four sides. What may you call this figure? A quadrilateral. Right. What is a quadrilateral? A quadrilateral is a plane figure bounded by four straight lines. Make six quadrilaterals on the board.

Observing carefully this illustration of teaching we derive our definition from it, namely: *Teaching is presenting an object of thought to the mind of the pupil in such a manner as to lead him to think and gain knowledge.*

First. The teacher presents the object of thought in such a way as to secure the attention of the pupil. The vital element of all teaching is mental activity. The mind of the teacher must lead the mind of the pupil. It is not merely a cold, intellectual process. Thought, feeling and volition are all involved. The teacher must be earnest, definite, sympathetic. Thus led, the pupil apprehends the object of thought, feels an interest, and voluntarily gives himself to the lead of the teacher. The pupil's mind must be actively at work with the teacher. One cannot teach if he has not the power to hold the attention of the pupil. Since in schools we must teach classes, the teacher must have the power to hold the attention of every member of his class, or he fails in his work.

Second. The teacher by appropriate questions, leads the pupil to discover for himself the truths he would have him learn, and

then to state them. He tells the pupil that which he cannot find out for himself without too much time and effort. He leads the pupil to think. The pupil must think for himself, must get the knowledge for himself. In this way he learns to think and to express his thoughts. He gets *ideas* first, then the right words for their expression. This is the natural order. The words thus learned have meaning.

Third. The pupil by his own thinking gains knowledge, the only way in which he can acquire it. It is real knowledge which he can use. In this illustration the knowledge gained is a definition, the sum of the essential marks of the object, the marks which belong in common to all quadrilaterals.

All that the teacher can do for his pupil is, to present to his mind the right object of thought in the right way. The pupil, under the guidance of the teacher, must think for himself, must gain knowledge for himself, and thus he acquires the ability and the inclination to make the right use of his mental power. When by the oral teaching now described, the pupil has gained ideas and associated them with their appropriate words, the author may be his teacher. He can then read the printed page and be led by it to think and gain knowledge. This is the written method of teaching. Both methods are necessary, but oral teaching is vastly more effective than written. It is indispensable in all branches of study, and with all grades of pupils. With the youngest pupils no other can be used. As the pupil learns how to study and gets a love for it, less oral teaching and more of written may be used; but so long as the living teacher is needed by the pupil, it is mainly for the oral teaching which he gives. The object of oral teaching is three-fold; to show the pupil *what* to study, to teach him *how* to study, and to excite his interest in the work. To accomplish this object the oral teaching should be given when the lesson is assigned to the pupil; then he knows how to prepare himself for a thorough examination upon the lesson,—a subsequent part of the teacher's work, and indispensable to the pupil,—to the end that he may become an independent, self-reliant worker.

Teacher and pupil must work together, must be in sympathy. If the pupil has no appetite for intellectual food, the teacher must

create one ; he must be able to excite an interest in subjects of study which are not in themselves attractive to the pupil. The art of teaching, then, includes all the means by which the teacher sustains the attention of his class.

What are the conditions for securing the attention of pupils ?

First of all, the teacher must know the laws of mental activity ; he must know what the powers of the mind are, and how they are called into exercise. One who would lead another must know how to address him so that he will be willing to follow. The teacher must not only know the general laws of mental activity, but he must form a distinct and definite estimate of the mental and moral character of each pupil. How else can he bring them into sympathy with himself and inspire them with a love for the work that shall secure their vigorous effort for its accomplishment.

Not only must the teacher know the mind he is to teach, but he must thoroughly know the subject he is to present ; he must know much more than he teaches, and he must have a ready command of his knowledge. The want of knowledge is the greatest hindrance to success. It makes the attempt to teach irksome, oftentimes disgusting, while the right use of this knowledge of the mind and the subject-matter makes teaching one of the most delightful of all occupations.

Not all of any subject can be taught ; hence, the teacher must select what the pupil can understand and what is most important for him to know.

Every lesson should have a *definite aim*. The teacher should decide what points he will make, in what order he will take them, and how he will present them. Such teaching will be like a well defined sermon, which an earnest listener commended by saying, "I like that kind of preaching ; there is something in it you can grab." It makes an impression.

The first question every teacher should ask in selecting the points of a lesson is, What do my pupils know of this subject ? We must begin with what the pupil knows if we would carry him successfully forward to higher attainments.

Another condition of success is the *proper arrangement of the ideas* to be taught. All lessons should be given in topics. By a

topic we mean a distinct subject of thought. Topics may be given orally to young pupils, with older pupils they may be given as printed in a well arranged text-book, or they may be given in writing. The pupil should be able to tell the subject of his lesson, and give the outline of topics which it contains. Such an arrangement of lessons avoids confusion in the teaching, helps the pupil to understand and to remember it; the lesson gives him real knowledge, and accustoms him to think in a logical manner.

Attention is to be gained by observing the *right mode of communicating* ideas. Lessons must be made plain to pupils. Ideas and facts are to be stated in their simplest form. Many ideas must be illustrated to make them clear to the mind of the pupil. This may be done by the use of verbal illustrations, or by the use of objects, or by diagrams and pictures. Definitions are to be worked out from observation and illustration after the manner indicated in the opening of this article.

Care in regard to the language used in teaching is very important in securing attention. The teacher's language is the medium of his thought; as such it should be *simple* in the words and in the construction used. It should be *precise*, exactly conveying his meaning and nothing more. It is also a model for his pupils, and should be worthy of their imitation. Good utterance is of the highest importance in securing attention. The teacher cannot do too much in improving his manner of speaking.

Last, but not least, is the teacher's manner. Every movement and every attitude is observed, and has its influence. A good manner tells strongly in the teacher's favor. The teacher should be cheerful, animated, self-possessed, enthusiastic, and decided. Such a manner will command attention.

A full lecture might be written upon any one of the points we have so briefly touched upon. If what has been written shall suggest what might have been said, the end of this article is reached.

A. G. BOYDEN.

SELECTIONS.

MISCELLANEOUS INFORMATION.—“The fact gave occasion for me to reflect on the folly of that practice which refused information on every subject till I could sit down to study it professionally. Most of the knowledge necessary to save a man from the appearance of gross ignorance may be collected without hindrance to any other pursuit, and almost without effort, by the mere use of those opportunities which chance is every day throwing in his way. In fact, that knowledge which it is disgraceful not to have, must, from the very condition of it, be easily got. How foolish then, to neglect, much more to decline such knowledge. Yet such has been my practice all my life. In fact, I seem to have treated knowledge like commodities, subjected to a duty which can only be permitted to land at certain places regularly appointed. Thus my information goes no further than my studies, and all that knowledge which is floating in the world, and which to a mind properly prepared, affords its chief nourishment, has been wholly lost to me; kept off by negligence on the one hand, and a perverse fancy on the other, and leading me, like some exotic in a greenhouse, to the precarious and imperfect supply of art.” — *Windham's Diary*.

NEW IDEAS. — “One of the greatest pains to human nature is the pain of a new idea. It is, as common people say, so ‘upsetting’; it makes you think that, after all, your favorite notions may be wrong, your firmest beliefs ill-founded; it is certain that till now there was no place allotted in your mind to the new and startling inhabitant; and now that it has conquered an entrance, you do not at once see which of your old ideas it will or will not turn out, with which of them it can be reconciled, and with which it is at essential unity. Naturally, therefore, common men hate a new idea, and are more or less disposed to ill-treat the original man who brings it. Even nations, with long habits of discussion, are intolerant enough. In England, where there is, on the whole,

probably a freer discussion of a greater number of subjects than ever was before in the world, we know how much power bigotry retains. But discussion, to be successful, requires tolerance. It fails wherever, as in a French political assembly, any one who hears anything which he dislikes, tries to howl it down. If we know that a nation is capable of enduring continuous discussion, we know that it is capable of practising with equanimity continuous tolerance." — *Walter Bagehot in Fortnightly Review, Jan., 1872.*

SCHOOL EDUCATION. — At school a boy's (or girl's) business is not simply, or mainly, to gain knowledge, but to learn how to gain it. If he learns his own place in the world, and, in a practical fashion, his duty towards other boys, and to his superiors as well as to his inferiors; if he acquires the apparatus for obtaining and storing knowledge, and some judgment as to what kind of knowledge is worth obtaining, his time at school has not been misspent, even if he carries away a very scanty store of actual facts in history, or literature, or physical science. If in his schoolboy days, you cram his head with such facts beyond what are merely elementary, you are very apt to addle his brains and make a little prig or pedant of him, incapable, from self-conceit, of a much further progress afterwards." A "*diluted omniscience*" unnecessary. "I remember one day going to consult Canning on a matter of great importance to me, when he was staying down at Enfield. We walked into the woods to have a quiet talk, and as we passed some ponds, I was surprised to find it was a new light to him that tadpoles turned into frogs.

"My uncle added, 'now don't you go and tell that story of Canning to the next fool you meet. Canning could rule and did rule a great and civilized nation; but in these days people are apt to fancy that any one who does not know the natural history of frogs must be an imbecile in the treatment of men.'" — *Frere*.¹

HAPPINESS. — The pleasure plant, though not to be found in the great botanical work of Linnæus, is one which grows in every

¹Works of John Hookham Frere, in verse and prose, now first collected, with a memoir by his nephews. 2 vols. 8°. London, 1872.

country inhabited by man. It seems to be independent of all climatic conditions, flourishing as vigorously in the coldest parts of Iceland as in the warmest district of India. The varieties of it are all but innumerable, and differ very much from each other. All kinds of its fruit, however, are described as having one common point of resemblance, viz., a highly agreeable flavor. The pleasure plant naturally grows wild, and often but little attention is paid to its culture. When its fruit is taken in excess it is followed by many unpleasant symptoms, — such as nausea, depression, insanity, and even death. When cultivated, however, and used moderately, the pleasure plant yields the finest exhilarant that nature has given us.

. . . We have had treatises on horticulture, agriculture, pisciculture, art culture, and there may be room, therefore, for one on pleasure culture. By that term it will be guessed the author means the science of so developing and training the manifold forms of pleasure which nature has given us, as to cultivate them into rational happiness. Some work of the kind seems specially opportune at the present hour when our school boards and social science meetings are competing in their efforts to educate the nation to a wise enjoyment of life. It is time, indeed, that the whole subject of happiness should be dragged down from the regions of transcendentalism in which essayists have left it, and be made, if possible, to take its place in the highways and byways of every-day life.

In addition to a popular outline of the sources of human pleasure, the author has added a running comment on the relations of religion to pleasure, which will, we trust, show the reason more clearly than he has apprehended it before, the truth that the Framer of the natural law of pleasure is the same gracious Being who tells us in Revelation that he has given us "all things richly to enjoy." — *Preface to "The Culture of Pleasure: or, the Enjoyment of Life in its Social and Religious Aspects."* London, 1872. [Some American publisher should reprint this thoughtful and wholesome book. It is brimful of pleasant anecdote.]

GLEANINGS.

A GOOD IDEA. — In order to make written exercises more interesting, I would suggest that a small box be nailed against the wall and marked "Post-office." Have an opening in the top large enough to slip a letter through. Have the pupils fold their exercises in the form of letters, put them in envelopes (of their own manufacture), direct and put in the office. Appoint one scholar to act as postmaster. Have the scholars write letters one to another, each letter, however, to contain a question taken from one of the text-books used in the school. Have the scholar who receives the letter answer the same, and the question which it contains, within a given time, or pay a fine. — *Maine Journal of Education*.

NARROW TEACHERS. — The complaint is often heard that teachers become fussy, arbitrary, and narrow in their views, and good for nothing else. And this statement is true, except the last clause, for if one has fallen into that condition, he is certainly unfit to teach. Such, doubtless, is the tendency in this profession; but it can be resisted, and that successfully. There is, however, but one way in which to do it, and that is by a persistent and liberal culture of the mind. I have, in my experience, met with many teachers whose society was as rich and genial as any I have ever found; but this has always come of constant mental activity and discipline. Believe me, teachers, by this means, and by this only, can you resist the narrowing influence of your work. You must learn to wield a free and intelligent judgment in various spheres. You may, for instance, even in the midst of your work, by a proper training of mind and heart, possess tastes that shall be so far consonant with the true principles of art as to catch the inspirations of nature. Sympathy with nature is one of the most potent preventives of the evils to which I have alluded. A teacher, furthermore, should be in constant communication with the great masters of thought, especially in our own language. To neglect this, seems to me inexcusable. It argues a smallness of mind and perversion of taste that should find no place in the work of instructing living souls. — *Conn. School Journal*.

FEMALE EDUCATION. — In the matter of dress-making, house-keeping, cooking, and such like domestic essentials, the absence of educa-

tion affects the poorer classes more than the rich. There was, it is said, a time when the highest lady thought it not beneath her to understand the culinary arts ; but perhaps those days, like Burke's days of chivalry, have gone forever, and only exist in the memory of the past. With the poorer, however, such matters assume the importance of an economic science. Dickens' graphic description of Dora's housekeeping, in "David Copperfield," is not far from the actual truth in thousands of cases. In the arrangement of dress ; in the judicious and economic selection of suitable articles, great waste comes from ignorance of the properties and uses of materials. Very few girls have any idea of cutting out clothing, or are practised while at school in "turning and altering," and other essentials for a really thrifty and managing housewife.

Looking, then, at the condition of society in all its branches, it must be acknowledged that though woman forms the prominent character in all domestic matters, and though her education must have a most important influence, and must affect the whole nation, yet it is in a most unsatisfactory condition. Their deficiency, on careful investigation, is but too evident ; and the evil consequences, though so serious, and so universal, are yet so old that society scarcely notices them, and can hardly appreciate the extent of the benefit which a reform, or rather, a revolution is capable of producing. — *American Educational Monthly*.

TEACHER AND CLASS. — A teacher whose acquirements are limited to the text-books he uses, can never achieve real success in conducting his recitations. "A good schoolmaster," says Guizot, "must know much more than he is called upon to teach, in order that he may teach with intelligence and taste." It is a question worthy of consideration whether the ambition and love of study inspired in a class by a scholarly, skilful, and enthusiastic teacher are not worth more to the pupils than all the studying they are able to do. What is more contagious than example ? What is more glorious than a noble example as an inspiration to worthy deeds ? The teacher who does not show that he can go beyond the text-book in his search after truth, and enrich the knowledge which his pupils have acquired by copious additions to it from his own well furnished storehouse, is lacking in the first element of power in his great work. This is in fact one of the true secrets of power in teaching. It secures the confidence, it arouses the interest, it commands the respect and admiration of the class, and supplies the most needful conditions to its progress. Hence, let the teacher ever go before his pupils in the class room full of his subject, all aglow with

its spirit, ready to meet every difficulty, to answer every objection, and supply every omission which may arise in the course of the sharp drill that is to follow. — *Minnesota Teacher*.

* WASTE OF TIME. — There is much time wasted in the school-room. Children, as well as teachers, are kept too long at a time, too many hours a day. They are all overworked. We want fewer pupils to a teacher, and not over four hours of school per day. With teachers properly trained to give more attention to natural science, and less to arithmetic, grammar, and geography, there would be more knowledge gained and fewer blockheads, — more interest in school and fewer cases for discipline. We only repeat what some of our best educators have already said, that there is much time worse than thrown away in studying some of what are styled the common school branches. A lad of ordinary intelligence will learn as much arithmetic or grammar in one school year, at the age of fourteen, as he will acquire by constant digging from five to fourteen. By the short course he saves time for natural science and other things, saves books and much patience of teachers. Who does not know hundreds of pupils who are wearing out their arithmetics in one place? They learn tables and ciphering over and over, forgetting and learning as many as ten times. When they learn tables for distance, they should be required to measure, with cord or poles, the dimensions of objects in the school-room and in the yard. Wine measure and dry measure will be comprehended and remembered, if the pupils are required to measure up water and sand, or other substances, as they learn the tables. The same is true of most other tables usually learned by rote.

When the pupil does not understand a subject, he becomes discouraged, and often acquires a dislike for school. Generally, the blame lies in the method of instruction, and not in the scholar. Our schools need more practical demonstrations; our teachers need to be taught some of the common things all around them, — taught how to observe and how to dissect. Much of the time of teachers' institutes during summer could be most profitably spent under the guidance of a competent naturalist, who should allow each to use a compound microscope to see objects which he was taught to prepare for himself. — *Michigan Teacher*.

LIP-LANGUAGE FOR MUTES. — The way in which articulation has been introduced into this country is a credit to American genius and perseverance. When Horace Mann and Dr. Howe, of Massachusetts, returned many years ago from a visit to the Articulation schools of Ger-

many, they were enthusiastic in their attempts to introduce the system into this country. Great opposition to it was made by our teachers of the deaf and dumb, — notably, by the American Asylum, at Hartford. They demonstrated, to their own satisfaction, at least, that it was not a practical acquirement. I think it quite possible that the German system, which they investigated, was not fit to be introduced into this country without some changes, better qualifying it to be in harmony with the national genius of our people. Be that as it may, the more enthusiastic upholders of the sign-system triumphantly interred articulation, and thought that it would stay buried. The way in which it next came to light, is one of the most purely providential incidents in the whole history of intellectual reform.

There was living in Massachusetts a young school-teacher, who had taught only hearing children, and who had no experience whatever in teaching the deaf and dumb. To her was brought a little dumb girl who had been deaf from the age of about two years. It was proposed that she should take charge of this child's education. Teaching her to speak was suggested as an experiment. This teacher, without any books or any advice whatever on the subject, simply because she had heard that such a thing was being successfully done in Germany, — though she did not know how, nor just where, — concluded to make the trial. In two years, by her own unaided efforts, she had not only taught this child of eight to speak and read the lips, but had grounded her in the studies usually pursued by children of her age. Her success drew attention for the second time to the system of articulation. It had a little group of friends in Massachusetts, and the result of Miss Rogers' first attempt at teaching the dumb to speak, and the deaf to comprehend is, that she is to-day the principal of the first articulation school under State patronage, ever established on this side of the Atlantic. She has gone to Germany to see if her system may be improved by incorporating with it essential parts of the German method. Both are, however, evidently founded upon one and the same natural principle. She had, for a while, a small private school; and I should fail to give due credit to modest worth did I neglect to mention the little school of Jonathan Whipple, in Mystic, Connecticut. This good and simple old man performed almost a miracle, considering his condition in life and his resources, in teaching his own son, a born deaf mute, to speak and read the lips. The "Springfield Republican" avers that Jonathan Whipple, in some respects, probably knows more than any other living person of this peculiar art; aptitude for which I regard as partly a

peculiar natural endowment. Not all can successfully teach articulation. It requires infinite patience and a most disinterested enthusiasm for success in the work. But how beautiful and how wonderful the results! Can anything be more satisfactory to a benevolent mind than the thought of unlocking the sealed lips, — of restoring one of these sad children of silence to glad intercourse with ordinary human beings? This feeling of being set apart is so terrible! Is there any work more Christ-like than to loose such bonds as these? More than once have I seen Miss Rogers' eyes fill with quick tears as some child would give a difficult sound which it had been vainly laboring, perhaps for days, to articulate. — *Howard Glyddon, in Christian Union.*

THOROUGHNESS. — People believe in it. Popular consent places it among qualities commendatory. A teacher is *thorough*, and straight-way canonized; a school, and patronized — no questions asked.

In what ought thoroughness to consist, — in thorough teaching, or thorough education? Shall we be thorough in *remembering* — remembering what looks tell us; how we did that which we have done once, and done well enough? Or thorough in *thinking*; thinking, that is, in the power to do what has not been told us, what we have not done? The first passes current. It is the kind attained by *examinations*. Now, if that be true thoroughness, the highest, college terms were as well spent in learning the names of all the counties in the States in alphabetical order, as in learning an equal number of facts from text-books. The difference in value between the names and the facts, *per se*, is n't worth reckoning, — only as the teaching is such as to teach the learner to use the latter.

Examination (except on the plan of original theses, as in European Universities and our professional schools) are a curse, — a cramping, paralyzing curse. Students stuff themselves to "pass" examination; stuff with facts from text-books, till they are like toads that wicked boys have filled with shot; stuff for months, instead of strengthening by mind action, essaying the original. What is the function of a college — not a primary school nor academy, — but, a college? It is a place to gather material to act upon, or to learn how to act.

A leading college in northeastern Ohio, not content with having its students stuff once a term, has doubled the dose, and put an examination in the middle of the term. Does it think intellects are like India-rubber bags, bigger the greater number of things they contain? To hold, to act; which is higher?

"Thoroughness," the popular, current kind in common schools, is

the greatest foe to the higher scholarship and the development of mind. Thousands annually in these schools are going over, and over, and over, geography, grammar, and arithmetic, "because they are not *thorough* in them"; that is, are not sure they can answer every question in geography and grammar, or solve every example in arithmetic. In the name of reason, after you have solved all or most of the examples in arithmetic, why spend many months going over what you have done, just to be sure you *remember how* it was done! Do you expect thus to develop power to do greater things without essaying them? Leave arithmetic when you have power to solve its problems. Never mind if you don't remember all of them, can't solve all without some study again. It will take no stronger thought, develop no more power worth computing, to go over them again. Arithmetic has done all it can for you — called into exercise the highest power its examples demand. Leave it; you sin against your mind to stay there longer! Take algebra; demand of your mind greater difficulties; spend no more time on the smaller; the discipline of those will develop a power to which these will appear simple, when needed. This is the principle that insures in higher scholarship, a larger mind power; fitness for greater deeds and nobler duties in life. Its so general violation is an enormous subtraction from the scholarship, the mind power, of our people; a fearful waste of the opportunities of our State-funded schools and our God-given time. Be banished such "thoroughness." — *National Normal*.

TOPICS.

— A BRIGHT, able paper is the *Amherst Student*. It thinks that "educated dyspepsia may fit men for heaven, but the church militant wants none of it." It augurs well when sons teach wisdom to their fathers.

— An article in the *Spirit of the Times* argues against "too much supervision" of schools by principals. The writer says, that if "the principal takes the laboring oar himself, in teaching, he can exact more from his subordinate teachers." We are inclined to think there is considerable truth in the idea of the writer, provided, as he says, "the school is sharply graded, with a corps of carefully-selected teachers; but with our present method of supervision by school boards, how

many schools will you find answering these conditions? Very few, we ween.

— Sir Henry Holland, Bart., now hale and vigorous, in the eighty-fifth year of his age, has just written "Recollections of Past Life." He is a distinguished English physician, president of the Royal Society, and son-in-law to Sidney Smith. The doctor attributes his robust health to the practice of devoting a portion of every year to foreign travel; and in this work of *Recollections*, he has recorded accounts of eight separate voyages to the United States and Canada, as well as visits to almost all the famous places on the globe. But travel benefits in other ways than by keeping up the stock of pristine vigor. It broadens the mind; it takes one out of his little half-bushel of daily tread and thought. Teachers, travel. Committees, let them travel. Don't grudge them the time thus spent. They will return to their posts,—their labor worth double to you and your children.

— Prof. Atkinson, in a letter to the editor, makes the following very sensible remarks about reading: Every one's reading should have an individual character. It is the poorest reason in the world for reading a book that the Rev. Dr. Blank, or the great literary Mr. So-and-so praise it. I am always grateful to any competent student for telling me what a book contains, or his opinion about it, provided he gives me reasons for his opinion; but whether I had better invest any portion of this limited life in reading it, is a point which no one can determine for me; for it depends upon the question whether it will fit into that self-education which ought always to be going on actively within us, and which, to be of any avail, should be individual as well as systematic. Nothing is more destructive of that than browsing about among all manner of books on all manner of subjects, reading one because it is by an American author, and another because it has a good moral tone, and another because the American Quarterly spoke well of it. It is on this principle that volumes of "Elegant Extracts" are sometimes manufactured, with the help of a good pair of scissors to serve to keep apart the gilt covers of some ornament for parlor tables. I prefer a pair of backgammon-boards.

— T.W. Higginson, in the "Woman's Journal" of March 9, says that "the 'favored classes' do not seek to train the minds of their girls, but their manners; and the girls whose minds are trained proceed from the middle class of society. We do not know between what de-

grees in the social scale lies the 'middle class' in Mr. Higginson's opinion; but if he means by 'middle class' those who are in easy circumstances, neither rich nor poor, we think the statement of the Worcester radical an exaggerated one. If he should go through our public schools, he would find we think that the rich, quite as generally as the middle class, send their children, girls as well as boys, to these schools. And we are inclined to think, too, that of what passes for education in our schools, the girls get as much, even more, than the boys; for as a class they remain in school considerably longer. Our observation has convinced us that, with exceptional cases, the greater number of private schools in our cities are maintained by dissatisfied pupils of the public schools, — those who by reason of sickness or dullness have been unable to meet the tests of promotions from time to time. And we venture the idea that the reason why the "real intellectual training" of American girls is inferior to that of boys (as Mr. Higginson seems to think) is because of the restraint which the popular thought has put upon their powers. The education of girls is one of passivity; of boys, activity. We hail the efforts of Mr. Higginson and his coadjutors, male and female, who are seeking to enlarge the sphere of woman and thus give a freer play to her powers.

NOTES BY THE WAY.

WE are glad to notice the disposition evinced at the annual town meetings last month to retain old and tried members of school committees, and to increase the appropriation for school expenses. . . . Are the children to sing at the next peace jubilee? We hope so, for to us their singing at the last was the finest feature; what more appropriate than for "peace on earth" to be chanted by the cherubs of earth. . . . The Brooklyn Board of Education recently raised the salaries of male principals, but refused to raise those of the lady principals. So does Boston. . . . M. Plantamsur predicts a comet next year to come in contact with the earth. Is anybody afraid? . . . The New York *Times* speaks of some of its palatial residences as "brown stone fever nests." . . . There are some of our schools which, on account of their boggy situation and careless ventilation, might be denominated brick children-slayers. . . . We are constantly noting the uneasy nature of Amherst students. Their latest move is to test the

legality of the forced attendance on church of students of legal age. . . . The Massachusetts Society for the Prevention of Cruelty to Animals offers prizes to Boston Grammar and High schools for best essays on cruelty to animals. A good way too to call the attention of children to this important subject. . . . What do Barnum's cannibals feed upon? is the harrassing question of the present hour. . . . Everett says, "Education is a better safeguard of liberty than a standing army." . . . Among the Jesuits it was a rule, after two hours of study, that there must be some relaxation, however trifling. Shrewd people, those Jesuits, and worthy of imitation in this age. . . . The city papers are demanding of merchants that they let their shop girls sit down. Teachers, let *your* girls and boys sit down. . . . The sudden collapse of the Tichborne case in England has made us all more sure of the identity of our friends. . . . Salem billiard halls can hold no boys under age without written permission from parents. Enforce the law everywhere, friend policemen! . . . Kansas has killed the Compulsory-Education Bill. First agriculture, say they; *then* education. We are sorry. . . . "The first use of education is to enable us to consult with the wisest and greatest of men on all points of earnest difficulties; and to use books rightly, is to go to them for help, and to receive from them the united sentence of the judges and councils of all time against our solitary and unstable opinion," says Ruskin. . . . The little eleven-year old boy, who, the other day, in Boston, on being locked up for truancy, feigned insanity, furnishes a severe commentary upon the growing disposition of criminals to set up as defence the same plea. Well may we ask, with Dr. Ray, "Are we all insane?" . . . Queen Victoria was reared in as much honesty and care about money matters as if she had been a plebeian's child. She was never allowed to buy beyond the amount of money in her purse. An example for the parents of children with less expectations. . . . A teacher in Wisconsin lets her children out five minutes to see the railway train as it passes. When the circus and menagerie go by, also, they go out to see. This is true object-teaching. Sensible teacher. . . . London has a population of 3,883,092, which is more than New York, Philadelphia, Boston, Brooklyn, Chicago, Baltimore, Cincinnati, New Orleans, San Francisco and Buffalo put together. . . . A late writer has acquitted Nero of playing the violin while Rome was burning. He proves an alibi. Besides, Nero couldn't fiddle. . . . The peach buds are all frost-bitten, is the old cry. The schools are all useless and humbugs, is another. Croakers still live, but we still get peaches. . . .

"No teacher is worthy the name, who cannot hold and interest *all* his class," says a paper. Does anybody believe it? We think not. . . . "Trust him little who praises all; him less who censures all; and him least who is indifferent about all." . . . New York has 24 daily papers, Paris 20, and London only 9. Is New York any better than London for it, — or any worse? . . . "Steady by jerks" must have originated from the operation of a galvanic battery. . . . Mrs. Whitney in "Zerub Throop's Experiment," gives some fine hints about astronomy for small children. The book is worth reading for that alone. . . . Socrates says, "there is but one good, which is knowledge, and one evil, which is ignorance." . . . "Sir Walter Scott said that even in a stage coach he always found somebody who could tell him something he did not know." If the last he refers to the somebody, we think there are a vast number like this "*he*" who can tell what they don't know, and tell it oftener than what they do know. . . . A western paper thinks the snail has a "right smart chance for a toothache. He has 110 rows of teeth, with 110 teeth in each row." Did he count them? . . . The educational outlook in Tennessee is indeed discouraging. The school law was repealed in 1869, and now the school-houses are virtually closed. Is not this an argument for national education? . . . We commend to the attention of educators, the report of Superintendent Harris to the St. Louis school board on the subject of introducing natural history into the common schools. Of what use is all our talk about the observing faculties being the earliest developed, and the discussions upon metaphysics so pleasing to superintendents and those in search of teachers, when we have advanced scarcely a step in applying these truths to the curriculum of our schools. Here is a "dreaming" metaphysician hitting the nail on the head, and we hope to see his programme, or "syllabus," as he calls it, extensively copied. . . . Dickens, referring to Mr. Boffin's begging correspondents, says: "Among them were several daughters of general officers long accustomed to every luxury of life except spelling." Spelling *is* a luxury, not a necessity. Scholars as well as citizens find the heaviest tax to be on luxuries. . . . It made us lenient years ago in a district school when the boy whose whipping had been postponed till the next day, brought us a box of delicious strawberries. His punishment was indefinitely postponed. . . . Some people talk so much and tell all they know, that they don't save enough for seed, and are always poverty-stricken, "hand-to-mouth" thinkers. . . . "There are two kinds of mornings, rainy and pleasant," is the heading of a composition before us.

INTELLIGENCE.

— The Middlesex County Teachers' Association will hold its annual meeting at West Newton, April 5 and 6.

— The Directors of the Massachusetts Society for the Prevention of Cruelty to Animals have offered a prize of *five dollars* to each of the grammar schools of Boston, for the best composition on "Kindness to Animals;" and a prize of *ten dollars* each to the Latin, English High, Girls' High and Normal, and the Roxbury and Dorchester High schools, and a copy of "Our Dumb Animals," for one year, to each of the writers of the four next best compositions in each school, on the same subject. The compositions are coming in in large numbers.

— Charlestown commemorated Washington's Birthday by dedicating one of the best-appointed school buildings in the State. The building cost \$92,000. Furniture about \$8,000 and land \$30,000.

The keys were delivered to W. E. Eaton, Principal of the school. His response was earnest, sensible and to the point. He claimed that the best teacher is one whose results cannot be reckoned in figures, or bounded by lines. Prof. B. F. Tweed, superintendent of schools, and several other gentlemen, made very interesting and eloquent speeches.

— In one city in Hungary, out of a population of 70,000, 48,000 are unable to read and write. In Archangel, Russia, only one in every 1,166 of the inhabitants can read and write! In Belgium, in the town of Roulers, out of 13,774 inhabitants, 9,849 are totally illiterate. In the factory districts of Belgium, out of 1,000 workmen, only 100 can read and write, and of the rest only fifty can read; and of 130 French officers, recently pris-

oners of war at Konisberg, Prussia, seventeen could not write their names. Out of every 100 children between the ages of six to thirteen, there attended school, in Saxony, Prussia, and Wurtemberg, 96 to 99. Switzerland, 95 to 96; Bavaria and Denmark, 89; France, 78; Sweden, 97; Netherlands, Belgium and England, 75 to 77; Mecklenberg, 64; Austria, 51; Spain, 46; Italy and Poland, 35; Greece, 29; Portugal, 14; Turkey, 11; Russia, 6.

— THE annual report of the schools of Cincinnati, O., for 1872, is an interesting and valuable document. The schools are superintended by John Hancock, a well-known leader in public education. He condemns the daily marking system, and recommends monthly written examinations. In his opinion, "a correct recitation is an effective device to make stupid scholars still more stupid, and tends to a lack of precision of thought and statement on the part of the bright ones." From the large infusion of the German element in the population, they have a German department in their schools, and more than one-half of all the pupils in the public schools study it. The interest of the superintendent in the subject of drawing has placed Cincinnati among the foremost in the strife for excelling in that most important branch of education. In several of the schools, ventilating stoves have replaced furnaces; the change has given satisfaction, and the committee recommend that these stoves be put in other schools. Number of different pupils registered, 27,140. Per cent of attendance, 95.5. Average number to a teacher, 44.5. Total average cost per pupil, \$24.37, exclusive of the cost of new buildings. They have for special

teachers, 7 in penmanship, 7 in drawing, 1 in gymnastics, and 6 in music.

— **BOSTON SCHOOLS.** The superintendent, in his semi-annual report for March, gives an outline of the course of study in the public schools for the last fifty years, and in a very interesting manner shows the superiority of the present condition of them over that of fifty years ago. The number of regular teachers are 122 males, 814 females; total, 936. The special teachers are, 1 in vocal culture, 1 in military drill, 5 in drawing, 4 in French, 2 in German, 6 in music, and 18 in sewing, — 17 males, and 20 females; total, 37. Number of pupils in the Latin school, 254 boys; English High, 442 boys; Girls' High and Normal, 550 girls; Roxbury High, 90 boys, and 126 girls; Dorchester High, 50 boys, and 82 girls. Average whole number in all the high schools, 836 boys, and 758 girls, — total, 1,594. Average whole number in the grammar schools, 10,398 boys, and 9,435 girls, — total, 19,833. Number in the primary schools, 8,118 boys, and 7,043 girls, — total, 15,161. Whole number of pupils in all grades, 36,588.

— **TEACHERS CONFIRMED.** Alice E. Spedel, Joanna Monroe, Caroline Eliot, Mary E. H. Ottwell, Ann E. McGrath, Mary C. Edes, Sarah E. Austin, Abbie L. W. Everett, Helen M. Hills, Annie W. Ford, Edna L. Gleason, Alice T. Kelley, and Annie H. Berry.

— Nearly one hundred of the graduates of Amherst college dined at Parker's last week.

— A new school-house has been built in East Cambridge. The building is built of brick, with sandstone trimmings, is four stories high, and is divided into twelve school-rooms, with appropriate recitation rooms, etc.

— W. A. Wilde, superintendent of the schools of that town, has tendered the School Committee of Malden a gift of \$500, to be used in supplying reference

books, maps, charts, etc., for the several schools in town.

— The Salem High School Association has erected a tablet in the hall of the High School building, in commemoration of its members who fell in the late war. The tablet is of marble, and besides the dates 1861-1865, bears the motto, "In memoriam — Pro Patria," the names of the heroes whose memory it commemorates, and the words, "Erected by the Salem High School Association."

— Barnstable has voted to abolish the district system. — The State has appropriated \$75,000 for a new boarding house for Westfield Normal school. — Prof. Moses T. Brown has done eloquent service in the recent political campaign in New Hampshire. — Fred. Foster leaves the Athol High school at the close of the present term. — James Powell is Principal of the High school at Ayer. — Athol elects a superintendent of schools this year. — Lowell has opened evening drawing schools. — Arthur C. Boyden, of Medway High school, has resigned.

— Anna C. Brackett, who received the highest salary of any female teacher in this country, is about to resign her position in the St. Louis Normal school, to open a private school in New York City. — The Bridgewater Normal has 156 pupils.

— Howard College has 71 scholarships, ranging from \$75 to \$300 dollars. — Dudley N. Griffin has been elected principal of the Middle Grammar school, New Bedford, at a salary of \$1,500.

— Mr. B. G. Northrop, secretary of the Connecticut Board of Education, has received a formal invitation to take charge of the educational interests of the Japanese empire. This empire has determined to remodel its entire educational system, even to the alphabet, on the American model, and this offer is in accordance with this general design. The salary offered is \$10,000 a year.

CAMBRIDGE. Charlotte E. Camp has been confirmed in the Thorndike Grammar school. Helen Shepard has resigned, and M. E. Hartwell appointed to fill her place. E. B. Hale has been unanimously re-elected superintendent.

BERKSHIRE ITEMS. Miss Clinton is teacher of the Williamstown High school; not Miss Graves, as printed in a late issue. — Valuable apparatus has been purchased for the use of Drury Academy (Public School), North Adams. A. D. Miner is Principal of the High school. — Miss Martha Lindley, head of the Grammar schools, has resigned her situation. — Cheshire has a graded school of some two hundred scholars, with five teachers. — Miss M. A. Neale, a graduate of Westfield Normal, is Principal of the High school. — Pittsfield Evening Schools have been a marked success; 336 pupils have been in attendance and have been instructed by six male teachers. Dr. Brewster is Superintendent of Pittsfield Schools. — H. R. Gibbs, of South Lee, succeeds Prof. Linfield in the Lenox High school. — May Berkshire expect a sight of the famous Smith and his models, or will they not bear transportation over the mountains?

— John Wilson has resigned, as principal of the Prescott school, Somerville. — David A. Caldwell of the Middle street Grammar school, New Bedford, goes into the new school-house, Providence, R. I. — John B. Gifford, of West-

port, late of the Bridgewater Normal school, takes a High and Grammar school, East Medway. — Frank B. Davis, of Tyngsboro', has taken a school in Slatersville, R. I., as has Edward P. Fitts. — Helen M. Williams, of Braintree, and Viola Littlefield, of Stoughton, have received appointments in Fall River. — Maria J. Bancroft, of Reading, and Nellie J. Bassett, of the same place, have received situations in East Bridgewater. — Susie E. Wade, of the Reading High school, resigns, to go South. — Emily F. Carpenter, of North Bridgewater, accepts a substitute's position in the Dwight school, Boston. — Martha A. Smith, of Gloucester, has been appointed head assistant in the Sherwin school, Boston Highlands, Miss Holbroke having gone into the girls' high and normal corps of teachers. — Walter S. Parker, of the Fifth street Grammar school, New Bedford, is elected usher in the Dwight School, Boston. — Sarah J. Leonard, principal of the North Marshfield grammar school, and member of the Marshfield school committee, has received an appointment as teacher in the Harvard grammar school, Charlestown. — A. H. Blaisdell, of the Chatham High school, has resigned, to accept a better position in another town. — Hattie E. Winchester, of Middleboro', has a Primary school in Malden. — E. S. Frisbee, of Northampton, goes to Binghamton, N.Y., to take charge of the High school. — The Westfield Normal school opened very finely on the 27th of February whole number of students, 141.

Books.

AROUND THE WORLD. By E. D. G. Prime, D. D. New York: Harper & Brothers.

The popular voyage for health is no longer to Europe, but around the globe. Fortunate, too, for readers of travel. So many in recent years have been the books issued on European travel, that travelling in those countries almost seems like reading some very interesting volume over again. Dr. Prime very sensibly devotes but few pages to Europe, and gives us a detailed and very interesting account of the more eastern countries. He also gives the reader much practical information as to the best seasons for visiting the warmer countries of the Eastern tropics, as well as the most convenient and suitable routes of travel.

THE LAND OF DESOLATION. By Isaac I. Hayes, M. D. New York: Harper & Brothers.

This is a volume by the great arctic explorer, Dr. Hayes. It is an account of a voyage made in a steam-yacht with Mr. Bradford, one of our most distinguished artists, for the purpose of obtaining materials for his easel. Of course it is no romance, and yet as fascinating as one, and conveying information in a most palatable way. We have often urged, in our review of such books as these, the superiority they have in enlarging the intelligence of the child, over the dry, monotonous text-books in geography or science. Every parent should set before his child from week to week a table for the mind as well as one for the physical appetite. It is strange that more do not. Here is a personal narrative of observation and adventure in Greenland, which, once read by lad or miss, would never be forgotten. Its mixture of history and description and incident, together with its profuse and excellent illustrations,

make it a most valuable book for the libraries of young people.

WATER AND LAND. By Jacob Abbott. New York: Harper & Brothers.

This is Vol. III. of "Science for the Young." The nation has had Mr. Abbott for a schoolmaster, we don't know how many years, — for nearly a generation, we should say. Certainly the first luscious mouthfuls of mental food which we recollect of receiving when a child were the Franconia Stories of this same child-loving author. Years have not diminished his ability to tell his stories in the same simple, delightful way. Here we have great geological principles so woven into the dialogue and illustrated with incidents, that they are welcome even to the intelligence of the youthful reader. It is copiously illustrated.

SCHOOLS AND SCHOOLMASTERS. From the writings of CHARLES DICKENS. Edited by T. J. Chapman, M.A. New York and Chicago: A. S. Barnes & Co.

As the title has it, this is a compilation from the writings of Dickens. We have Dotheboys Hall, The Schools at Dr. Blimber's, Salem House, and Dr. Strong's. The readers of Dickens' novels, — and who has not read them? — will remember them all. The compilation has been very well done, the threads very skilfully severed and tied together again. Dickens' school pictures are hardly true to the modern realities; certainly the schools of this country are no such barbarous institutions. We were sorry, in looking through the work, not to see by the side of old Squeers, with his horrid brimstone and molasses, the good old schoolmaster who sheltered little Nell, and sat by the bedside of the dying boy, in that sweetest picture which Dickens ever painted.

PHYSIOLOGY OF THE SOUL AND INSTINCT, AS DISTINGUISHED FROM MATERIALISM. By MARTYN PAINE, LL.D. New York : Harper & Brothers.

This is a volume of some seven hundred pages, written by a man learned in the departments of physiology, metaphysics, and geology, and earnest in the support of what he regards as essential to religion. It is written in the interest of theology, and aimed at the deductions of modern science, theoretical geology, Darwinism, and everything which is supposed to favor materialism.

Whatever we may think of the author's success in vindicating the literal accuracy of the Mosaic account of the creation, and some other knotty points in theology, against the scientific theories, we cannot but sympathize with the earnest convictions of a man who, when even the religious press has succumbed, stands up alone, and boldly contends for what he regards as truth.

We confess that we had supposed some of these matters were finally disposed of, and that no essential harm had been inflicted on religion, or the Bible, though it might be necessary to re-cast our theology in some respects, which would not, perhaps, be an unmitigated evil. We have noticed, too, that geology is rather fond of throwing stones at theology; but as none of them seem to hit religion, we have rather enjoyed the sport. If the same hard missiles can be hurled back with effect against the deductions of theoretical geology, we have no fear that the battle will be won by the legions of error.

A MANUAL OF ENGLISH LITERATURE: A Text-Book for Schools and Colleges. By JOHN S. HART, LL. D. Philadelphia : Eldridge & Brother.

This book, the author tells us, is intended to serve the double purpose of a text-book and a book of reference.

We think a book that serves a single purpose well is a good book, and this certainly will be found an excellent book of reference.

It is rather a biographical dictionary of

authors, with an enumeration of their principal works, than a manual of literature.

Give us as a "text-book" enough of Chaucer, Spencer, Shakspeare, Milton, and a few of the best prose writers, to interest the student in the literature of their times, with this work for reference, and we should consider ourselves fully equipped.

SHAKSPEARE'S KING HENRY THE EIGHTH. Edited by WM. J. ROLFE. New York : Harper & Brothers.

This edition, prepared on the same plan as those already published, will be welcomed by every student of Shakspeare, and will do much to increase the number of those entitled to be called so.

The notes seem to be judicious, and, by referring to previous volumes, the author has been able to say a great deal in a comparatively small space. Such works are of great educational interest.

SCRIBNER'S MONTHLY. New York : Scribner & Co.

The April number of this popular magazine is on our table. It fittingly closes the third volume. With the next, its publishers promise "better paper, and pages even more attractive than its predecessor." Aside from the ability of its writers, the two charming features of the magazine are the variety of its contents and the brevity of its articles. It deserves its popularity.

THE SCHOOLMATE. Boston : J. H. Allen.

No magazine for boys and girls seems to be quite in fashion, just now, that does not possess some leading writer who has gained his laurels in fields where the young folks like to play. Among these, ——— holds a foremost rank, and the publisher of "The Schoolmate" has the good fortune to have secured him. Besides, Mr. Allen spreads the table for the little ones with shorter courses, — sketches and stories, and anecdotes, rebus and puzzles and dialogues; and speeches, with gestures most appropriate, and charming music for dessert. No wonder the children like it.